

Abstract (NC 84,830)

This invention pertains to a chalcogenide glass of low optical loss that can be on the order of 30 dB/km or lower, and to a process for preparing the chalcogenide glass. The process includes the steps of optionally preparing arsenic monochalcogenide precursor or the precursor can be provided beforehand; dynamically distilling the precursor in an open system under vacuum from a hot section to a cold section to purify same; homogenizing the precursor in a closed system so that it is of a uniform color; disposing the distilled or purified precursor and at least one chalcogenide element at a hot section of an open distillation system; dynamically distilling under vacuum in an open system so that the precursor and the at least one chalcogenide element are deposited at a cold section of the open system in a more purified state; homogenizing the precursor and the at least chalcogenide element in a closed system while converting the precursor and the at least one chalcogenide element from crystalline phase to glassy phase.